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wherein the first acoustic impedance and the second acoustic impedance have a contrast ratio of at least 25 to improve medical device echogenicity.

20. (added) The implantable echogenic medical device as in claim 19, further comprising porous particles fixed in the polymer, the porous particles being configured to absorb body fluid and have a third acoustic impedance that is higher than the first acoustic impedance.
21. (added) The implantable echogenic medical device as in claim 19 wherein the pores are at least 50 nanometers large.

REMARKS

Claims 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17 and 18 have been canceled. Claims 19, 20 and 21 have been added. Claims 1, 6 and 16 have been amended. Claims 1, 6, 16, 19, 20 and 21 remain pending in the application. Support for added claim 19 can be found in the disclosure on page 9, line 12 through page 10 line 20. Support for added claim 20 can be found in the disclosure on page 13, line 16 through page 14, line 27. Support for added claim 21 can be found in the disclosure on page 13, lines 3-8. Support for amended claims 1, 6 and 16 can be found in the specification, claims and drawings and more specifically in the disclosure page 9, line 12 through page 10 line 20. The applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and following response.

Attached to this reply are a marked-up version of the changes made to the claims labeled "Amended Claims Version With Markings To Show Changes Made."

Claim Rejections – 35 USC § 102

Claims 1, 2, 5, 6 and 8 stand rejected under 35 U.S.C. 102(b) as being unpatentable by Gomez Alvarez-Arenas et al. (IEEE Ultrasonics Symposium). Claims 5 and 8 have been cancelled rendering the rejection moot to those claims. Independent claims 1 (amended), and 6 (amended) recite an "echogenic medical device" having "a first acoustic impedance" and a

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polymer that has "a second acoustic impedance". Echogenicity is "the relative extent that a surface reflects incident ultrasonic energy directly back to a sensor or emitter of ultrasonic energy." (Disclosure, page 4, lines 24-26) It is submitted that Gomez Alvarez-Arenas et al. is directed to porous piezoceramic ultrasonic transducers. (Abstract and Introduction). The American Heritage Dictionary defines a transducer as "[a] substance or device, such as a piezoelectric crystal, microphone, or photoelectric cell, that converts input energy of one form into output energy of another." (4th Ed. 2000, p. 1832) It is respectfully submitted that echogenicity merely reflects energy while a transducer converts energy; therefore, Gomez Alvarez-Arenas et al. do not teach the problem to be solved by the claimed invention or allude to echogenicity. Additionally, claims 1 (amended) and 6 (amended) recite "a first acoustic impedance" and "a second acoustic impedance." Gomez Alvarez-Arenas et al. do not teach acoustic impedance. Further claims 1 (amended) and 6 (amended) recite "a ploymer" whereas it is submitted that Gomez Alvarez-Arenas et al. teach ceramics. Accordingly, it is believed that claims 1 (amended) 6 (amended) overcome this rejection; therefore, the applicant respectfully request that the rejection be withdrawn.

Claim Rejections – 35 USC § 103

Claims 9, 10, 11, 14, 16 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez Alvarez-Arenas et al. in view of Hillenbrand et al. (IEEE Conference). Claims 9, 10, 11, 14, 15 and 18 have been cancelled rendering the rejection moot for those claims. Claim 16 (amended) recites an "echogenic medical device" having "a first acoustic impedance" and a polymer that has "a second acoustic impedance". It is respectfully submitted that Gomez Alvarez-Arenas et al does not teach or allude to claim 16 (amended) according to the response given above under 35 U.S.C. 102(b). Likewise, it is respectfully submitted that Hillenbrand alone or in combination with Gomez Alvarez-Arenas et al. does not teach or allude to claim 16 (amended) because Hillenbrand is also directed to piezoelectric devices, i.e., transducers, and more specifically to "permanently charged cellular polypropylene films." (Abstract) In Hillenbrand, injected gas bubbles change the charge of material, (Introduction) whereas in claim 16 (amended) the "blending the porous particles with the polymer" changes the acoustic impedance of the material. It is believed

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that claim 16 (amended) overcomes this rejection; therefore, the applicant respectfully request the rejection be withdrawn.

Claims 3, 4 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez Alvarez-Arenas et al. as applied to claims 1 and 6 above and further in view of Bosley (US 5,289,831). Claims 3, 4, and 7 have been cancelled rendering the rejection moot.

Claims 12, 13, 15 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gomez Alvarez-Arenas et al. and Hillenbrand et al. as applied to claims 11, 14 and 16 above and further in view of Bosley. Claims 12, 13, 15 and 17 has been cancelled rendering the rejection moot.


In view of the above, it is submitted that all claims pending in the application are in condition for allowance. Accordingly, allowance of claims 1, 6, 16, 19, 20 and 21 is respectfully requested. Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail at the address below. I understand that a copy of these communications will be made of record in the application file. M.P.E.P. § 502.03.

Respectfully submitted,

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Attachment(s):

- Amended claims with markings.


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Amended Claims Version With Markings To Show Changes Made

1. (amended) An echogenic medical device comprising a porous polymeric material having a second acoustic impedance that is at least a portion of a structural component of the an echogenic medical device having a first acoustic impedance.
2. The device of claim 1, wherein the porous polymeric material is preparable by providing a phase separated composition comprising a polymer and an extractable material, and extracting the extractable material from the composition.
3. (cancelled)
4. (cancelled)
5. (cancelled)
6. (amended) A method for preparing an echogenically enhanced medical device, the method comprising:
providing a phase separated composition comprising a polymer and an extractable material;
shaping the composition to form at least a portion of ~~the~~ an echogenic medical device having a first acoustic impedance; and
extracting the extractable material from the composition to create a second acoustic impedance.
7. (cancelled)
8. (cancelled)
9. (cancelled)

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10. (cancelled)

11. (cancelled)

12. (cancelled)

13. (cancelled)

14. (cancelled)

15. (cancelled)

16. (amended) A method for preparing an echogenically enhanced medical device, the method comprising:

providing at least a structural component of the medical device having a first acoustic impedance;

providing a polymer that is curable by irradiation with ultraviolet light;

blending porous particles with the polymer to produce a composition that is curable by irradiation with ultraviolet light;

applying the composition to the structural component of the medical device; and

curing the composition by irradiation with ultraviolet light to create a second acoustic impedance.

17. (cancelled)

18. (cancelled)

19. (added) An implantable echogenic medical device, comprising:
a housing formed from a material having a first acoustic impedance;

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- a polymer covering at least a portion of the housing; and
pores carried in the polymer, the pores containing air having a second acoustic
impedance that is higher than the first acoustic impedance,
wherein the first acoustic impedance and the second acoustic impedance have a
contrast ratio of at least 25 to improve medical device echogenicity.
20. (added) The implantable echogenic medical device as in claim 19, further comprising
porous particles fixed in the polymer, the porous particles being configured to absorb
body fluid and have a third acoustic impedance that is higher than the first
acoustic impedance.
21. (added) The implantable echogenic medical device as in claim 19 wherein the pores
are at least 50 nanometers large.

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PATENT RECORD SEARCH

Docket No.	Ctry	Rel.	Rel.	#	Type	Status	Group	Div.	Attorney	App No	Pat No.
P10029.00	US					F		LW091	TFW	10/127,034 04/22/2002	
Agent: Agent Ref. No: TITLE: PERCISE CARDIAC LEAD PLACEMENT BASED ON IMPEDANCE MEASUREMENTS INVENTORS: Smits, Karel P.A.A. Struble, Chester L.											
P10157.00	US					F		LW091	TFW	10/127,037 04/22/2002	
Agent: Agent Ref. No: TITLE: CARDIAC RESYNCHRONIZATION WITH ADAPTIVE A1-A2 AND OR V1-V2 INTERVALS INVENTORS: Grandjean, Pierre A. Struble, Chester L.											
P10183.00	US					F		LW091	TFW	09/897,291 06/29/2001	
Agent: Agent Ref. No: TITLE: CATHETER SYSTEM HAVING DISPOSABLE BALLOON INVENTORS: Greco, Francesco Jorgensen, Kenneth Nielsen, Marianne Pedersen, Anders Kirstein Aundal, Knud											
P10194.00	US					F		LW091	TFW	10/126,733 04/22/2002	
Agent: Agent Ref. No: TITLE: ESTIMATION OF STROKE VOLUME AND CARDIAC OUTPUT USING AN INTRACARDIAL PRESSURE SENSOR INVENTORS: Muhlenberg, Lambert Struble, Chester L.											
P10282.00	US					F		LW091	TFW	10/126,710 04/22/2002	
Agent: Agent Ref. No: TITLE: CARDIAC OUTPUT MEASUREMENT USING DUAL OXYGEN SENSORS IN RIGHT AND LEFT VENTRICLES INVENTORS: Struble, Chester L. Muhlenberg, Lambert Grandjean, Pierre A.											
P10283.00	US					F		LW091	TFW	10/126,816 04/22/2002	
Agent: Agent Ref. No: TITLE: ORGANIZING DATA ACCORDING TO CARDIAC RHYTHM TYPE INVENTORS: Struble, Chester L. Muhlenberg, Lambert Grandjean, Pierre A.											
P10321.00	US					F		LW091	TFW	10/127,038 04/22/2002	
Agent: Agent Ref. No: TITLE: ATRIOVENTRICULAR DELAY ADJUSTMENT INVENTORS: Struble, Chester L. Muhlenberg, Lambert											
P10344.00	US					F		LW091	TFW	10/126,638 04/22/2002	
Agent: Agent Ref. No: TITLE: SEAMLESS COMMUNICATION BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE SYSTEM INVENTORS: Houben, Richard P M Donders, Adrianus P. (Jos)											
P10346.00	US				L	F		LW091	TFW	60/331,543 11/19/2001	
Agent: Agent Ref. No: TITLE: METHOD FOR NON-INVASIVE PETAL CARDIAC PACING INVENTORS: Eick, Olaf J. Miehaus, Michael Houben, Richard P M											

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PATENT RECORD SEARCH

Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P10408.00	US				F		LW091	TFW	10/133,466 04/29/2002	
Agent: Agent Ref. No: TITLE: STIMULATION CONTROL FOR BRAIN STIMULATION INVENTORS: Gielen, Frans L H										
P10410.00	US			L	F		LW091	TFW	60/333,473 11/28/2001	
Agent: Agent Ref. No: TITLE: METHOD TO SENSE A BRAIN SIGNAL CORRESPONDING TO PERCEPTION OF PAIN AND USE AS FEEDBACK TO CONTROL A BRAIN NEUROSTIMULATOR, DRUG INFUSION DEVICE, OR OTHER MEDICAL DEVICE INVENTORS: Mullett, Keith R.										
P10410.00	US				F		LW091	TFW	10/132,508 04/26/2002	
Agent: Agent Ref. No: TITLE: BRAIN SIGNAL FEEDBACK FOR PAIN MANAGEMENT INVENTORS: Mullett, Keith R.										
P10438.00	US				F		LW091	TFW	10/131,261 04/25/2002	
Agent: Agent Ref. No: TITLE: IMPLANTABLE ELECTROPORTION THERAPY DEVICE AND METHOD FOR USING SAME INVENTORS: Ferek-Petric, Bozidar										
P10489.00	US			L	F		LW091	TFW	60/336,728 12/07/2001	
Agent: Agent Ref. No: TITLE: PRECORDIAL SUPERIOR VENA CAVA ELECTRODE ARRANGEMENT FOR AN IMPLANTABLE CARDIOVERTER DEFIBRILLATOR INVENTORS: Smits, Karel P.A.A.										
P10498.00	US			L	F		LW091	TFW	60/375,080 04/25/2002	
Agent: Agent Ref. No: TITLE: PACEMAKER BLANKING BY MAGNETIC RESONANCE IMAGING (MRI) DEVICE INVENTORS: Zeijlemaker, Volkert A										
P10499.00	US			L	F		LW091	TFW	60/375,076 04/25/2002	
Agent: Agent Ref. No: TITLE: MAGNETIC RESONANCE IMAGING (MRI) TRIGGERED BY THE IMPLANTING PACING SYSTEM INVENTORS: Zeijlemaker, Volkert A										
P10500.00	US			L	F		LW091	TFW	60/375,077 04/25/2002	
Agent: Agent Ref. No: TITLE: TELEMETRY BLANKING FOR PACEMAKERS AND ICDs BY MAGNETIC RESONANCE IMAGING (MRI) DEVICES INVENTORS: Zeijlemaker, Volkert A										
P10512.00	US			L	F		LW091	TFW	60/375,081 04/25/2002	
Agent: Agent Ref. No: TITLE: EXTERNAL PUMP CONTROLLER INVENTORS: Donders, Adrianus P. (Jos) Houben, Richard P M										
P4059.01	US				F		LW091	TFW	09/558,869 04/28/2000	
Agent: Frank B. Dehn & Co. Agent Ref. No: TITLE: METHOD AND APPARATUS FOR INHIBITING OR MINIMIZING CALCIFICATION OF AORTIC VALVES INVENTORS: Sutton, Richard										
P4517.00	US				F		LW091	TFW	09/542,258 04/03/2000	
Agent: Agent Ref. No: TITLE: DUAL CHAMBER PACING SYSTEM HAVING TIME- ADAPTIVE AV DELAY INVENTORS: Struble, Chester L. Keynen, Henri G.										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P4566.00	US				F		LW091	TFW	09/721,881 11/27/2000	
Agent: Agent Ref. No: TITLE: STENTS AND METHODS FOR PREPARING STENTS FROM WIRES HAVING HYDROGEL COATING LAYERS THEREON INVENTORS: Verhoeven, Michel Cahalan, Patrick T. Cahalan, Linda L. Larik, Vincent										
P4782.03	US	C	01	M	F		LW091	TFW	09/494,531 01/31/2000	
Agent: Agent Ref. No: TITLE: SYSTEM AND METHOD FOR RESPIRATION - MODULATED PACING INVENTORS: Renirie, Alexis C.M. Schouten, Vincent JA										
P4971.04	US	C	01	M	F		LW091	TFW	09/433,567 11/04/1999	
Agent: Agent Ref. No: TITLE: SYSTEM FOR PANCREATIC STIMULATION AND GLUCOSE MEASUREMENT INVENTORS: Houben, Richard P M Renirie, Alexis C.M. Weijand, Koen J.										
P4971.05	US	D	02		F		LW091	TFW	09/551,216 04/17/2000	
Agent: Agent Ref. No: TITLE: A SYSTEM FOR DELIVERING INSULIN INVENTORS: Houben, Richard P M Renirie, Alexis C.M. Weijand, Koen J.										
P4971.07	US	C	02		F		LW091	TFW	09/945,686 09/05/2001	
Agent: Agent Ref. No: TITLE: SYSTEM FOR PANCREATIC STIMULATION AND GLUCOSE MEASUREMENT INVENTORS: Houben, Richard P M Renirie, Alexis C.M. Weijand, Koen J.										
P7322.02	US	D	01		F		LW091	TFW	09/558,872 04/28/2000	
Agent: Agent Ref. No: TITLE: IMPLANTABLE DRUG INFUSION DEVICE HAVING A FLOW REGULATOR INVENTORS: Renaud, Philippe Haller, Markus Amacker, Christian										
P7322.04	US	C	01		F		LW091	TFW	09/712,237 11/15/2000	
Agent: Agent Ref. No: TITLE: IMPLANTABLE DRUG INFUSION DEVICE HAVING A FLOW REGULATOR INVENTORS: Renaud, Philippe Haller, Markus Amacker, Christian										
P7326.02	US	D	01	M	F		LW091	TFW	09/273,457 03/22/1999	
Agent: Agent Ref. No: TITLE: MEDICAL ELECTRICAL LEAD INVENTORS: Woloszko, Jean Camps, Antoine N J M (Toine) Van Der Kruk, Ron										
P7354.02	US	P	01	M	F		LW091	TFW	09/494,530 01/31/2000	
Agent: Agent Ref. No: TITLE: SAFETY VALVE ASSEMBLY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION DEVICE INVENTORS: Haller, Markus Weijand, Koen J.										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P7354.03	US	P	02		F		LW091	TFW	09/519,563 03/06/2000	
Agent: Agent Ref. No: TITLE: DRIVE CIRCUIT HAVING IMPROVED ENERGY EFFICIENCY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION OR DELIVERY DEVICE INVENTORS: Haller, Markus Weijand, Koen J.										
P7354.06	US	D	01		F		LW091	TFW	10/132,515 04/26/2002	
Agent: Agent Ref. No: TITLE: SAFETY VALVE ASSEMBLY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION DEVICE INVENTORS: Haller, Markus Weijand, Koen J.										
P7354.07	US	D	02		F		LW091	TFW	10/132,514 04/26/2002	
Agent: Agent Ref. No: TITLE: SAFETY VALVES ASSEMBLY FOR IMPLANTABLE BENEFICIAL AGENT INFUSION DEVICE INVENTORS: Haller, Markus Weijand, Koen J.										
P7438.06	US	P	01		F		LW091	TFW	09/871,657 06/04/2001	
Agent: Agent Ref. No: TITLE: DEVICES, SYSTEMS AND METHODS FOR TRANSLUMINALLY AND CONTROLLABLY FORMING INTRAMYOCARDIAL CHANNELS IN CARDIAC TISSUE INVENTORS: Dietz, Ulrich Eick, Olaf J. Duysens, Victor Darius, Harold										
P7492.01	US	D	01		F		LW091	TFW	09/746,011 12/26/2000	
Agent: Agent Ref. No: TITLE: LAMINA PROSTHESIS FOR DELIVERY OF MEDICAL TREATMENT INVENTORS: Gielen, Frans L H Knuth, Henricus M.										
P7492.02	US	D	02		F		LW091	TFW	09/746,021 12/26/2000	
Agent: Agent Ref. No: TITLE: LAMINA PROSTHESIS FOR DELIVERY OF MEDICAL TREATMENT INVENTORS: Gielen, Frans L H Knuth, Henricus M.										
P7553.00	US				F		LW091	TFW	09/433,564 11/04/1999	
Agent: Agent Ref. No: TITLE: BIOLOGICAL TISSUE ADHESIVES, ARTICLES, AND METHODS INVENTORS: Hendriks, Marc Verhoeven, Michel Cahalan, Patrick T. Larik, Vincent										
P7553.01	US	D	01		F		LW091	TFW	10/132,516 04/26/2002	
Agent: Agent Ref. No: TITLE: BIOLOGICAL TISSUE ADHESIVES, ARTICLES, AND METHODS INVENTORS: Hendriks, Marc Verhoeven, Michel Cahalan, Patrick T. Larik, Vincent										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P7565.00	US				F		LW091	TFW	09/340,440 06/28/1999	
Agent: Agent Ref. No: TITLE: IMPLANTABLE DEVICE INCLUDING A POLYAMINO ACID COMPONENT INVENTORS: Larik, Vincent Hendriks, Marc Cahalan, Patrick T. Verhoeven, Michel Cahalan, Linda L.										
P7640.08	US	D	06		F		LW091	TFW	09/946,495 09/06/2001	
Agent: Agent Ref. No: TITLE: FOUR-CHAMBER PACING SYSTEM FOR OPTIMIZING CARDIAC OUTPUT AND DETERMINING HEART CONDITION INVENTORS: Leinders, Robert Bakels, Arnoldus P. DeRoos, Cobus										
P7718.00	US				F		LW091	TFW	09/449,936 11/29/1999	
Agent: Agent Ref. No: TITLE: MEDICAL ELECTRICAL LEAD HAVING BENDING STIFFNESSES WHICH INCREASE IN THE DISTAL DIRECTION INVENTORS: Smits, Karel P.A.A.										
P7718.03	US	D	01		F		LW091	TFW	09/947,060 09/06/2001	
Agent: Agent Ref. No: TITLE: MEDICAL ELECTRICAL LEAD HAVING BENDING STIFFNESSES WHICH INCREASE IN THE DISTAL DIRECTION INVENTORS: Smits, Karel F.A.A.										
P7853.01	US	D	01		F		LW091	TFW	09/832,925 04/12/2001	
Agent: Agent Ref. No: TITLE: APPARATUS AND METHOD FOR MEASURING THE AMOUNT OF FLUID CONTAINED IN AN IMPLANTABLE MEDICAL DEVICE INVENTORS: Peer, Twan Bakels, Arnoldus P.										
P7856.02	US	D	01		F		LW091	TFW	09/799,709 03/07/2001	
Agent: Agent Ref. No: TITLE: SYSTEM AND METHOD FOR OPTIMIZED BRAIN STIMULATION INVENTORS: Gielen, Frans L H										
P7902.00	US				F		LW091	TFW	09/340,441 06/28/1999	
Agent: Agent Ref. No: TITLE: METHOD FOR COATING IMPLANTABLE DEVICES INVENTORS: Martinez, Gonzalo Taylor, John J Keeney, Kenneth W. Haller, Markus										
P7946.00	US				F		LW091	TFW	09/779,535 02/09/2001	
Agent: Agent Ref. No: TITLE: METHODS FOR MODIFYING SURFACES OF ARTICLES INVENTORS: Koulik, Edouard Cahalan, Patrick T. Iwata, Hiroo										
P8027.00	US				F		LW091	TFW	09/348,506 07/07/1999	
Agent: Agent Ref. No: TITLE: SYSTEM FOR REMOTE COMMUNICATION WITH A MEDICAL DEVICE INVENTORS: Ferek-Petric, Bozidar										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P8032.00	US				F		LW091	TFW	09/842,404 04/26/2001	
Agent: _____ Agent Ref. No: _____ TITLE: DIAGNOSTIC FEATURES IN BI-ATRIAL AND/OR BI-VENTRICULAR PACING SYSTEMS INVENTORS: Struble, Chester L.										
P8047.00	US				F		LW091	TFW	09/518,796 03/03/2000	
Agent: _____ Agent Ref. No: _____ TITLE: SYSTEM AND METHOD FOR MONITORING AND CONTROLLING THE GLYCEMIC STATE OF A PATIENT INVENTORS: Houben, Richard P M Larik, Vincent										
P8131.00	US				F		LW091	TFW	09/558,867 04/28/2000	
Agent: _____ Agent Ref. No: _____ TITLE: CORONARY SINUS FLOW REGULATED PACING INVENTORS: Ferek-Petric, Bozidar										
P8158.00	US				F		LW091	TFW	09/558,870 04/28/2000	
Agent: _____ Agent Ref. No: _____ TITLE: ISCHEMIC HEART DISEASE DETECTION INVENTORS: Ferek-Petric, Bozidar										
P8158.02	US	D	01		F		LW091	TFW	10/085,072 03/01/2002	
Agent: _____ Agent Ref. No: _____ TITLE: ISCHEMIC HEART DISEASE DETECTION INVENTORS: Ferek-Petric, Bozidar										
P8158.03	US	D	02		F		LW091	TFW	10/085,047 03/01/2002	
Agent: _____ Agent Ref. No: _____ TITLE: ISCHEMIC HEART DISEASE DETECTION INVENTORS: Ferek-Petric, Bozidar										
P8191.00	US				F		LW091	TFW	09/843,914 04/30/2001	
Agent: _____ Agent Ref. No: _____ TITLE: METHODS FOR ADJUSTING CARDIAC DETECTION CRITERIA AND IMPLANTABLE MEDICAL DEVICES USING SAME INVENTORS: Ferek-Petric, Bozidar										
P8240.00	US				F		LW091	TFW	09/779,536 02/09/2001	
Agent: _____ Agent Ref. No: _____ TITLE: HEPARIN COMPOSITIONS AND METHODS OF MAKING AND USING THE SAME INVENTORS: Koullik, Edouard										
P8278.00	US				F		LW091	TFW	09/842,879 04/27/2001	
Agent: Muetting, Raasch, Gebhardt Agent Ref. No: 134.01550101 TITLE: CONTROL OF PACING RATE IN MODE SWITCHING IMPLANTABLE MEDICAL DEVICES INVENTORS: Struble, Chester L. Dunham, David										
P8279.00	US				F		LW091	TFW	09/842,884 04/27/2001	
Agent: _____ Agent Ref. No: _____ TITLE: COMMITTED VENTRICULAR SAFETY PACING INVENTORS: Struble, Chester L.										
P8382.00	US				F		LW091	TFW	09/842,233 04/26/2001	
Agent: _____ Agent Ref. No: _____ TITLE: HYSTERESIS ACTIVATION OF ACCELERATED PACING INVENTORS: Struble, Chester L. Grandjean, Pierre A.										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P8418.00	US				F		LW091	TFW	09/353,619 07/15/1999	
Agent: _____ Agent Ref. No: _____ TITLE: SYSTEM FOR PROVIDING MEDICAL ELECTRICAL STIMULATION INVENTORS: Holsheimer, Jan										
P8553.00	US	P	01		F		LW091	TFW	09/519,562 03/06/2000	
Agent: _____ Agent Ref. No: _____ TITLE: MEDICAL ELECTRICAL LEAD WITH INTERCHANGEABLE FIXATION MEMBER INVENTORS: Camps, Antoine N J M (Toine) Duysens, Victor Kretzers, Leonardus J. C. Gerber, Martin T.										
P8553.01	US	D	01		F		LW091	TFW	10/132,513 04/26/2002	
Agent: _____ Agent Ref. No: _____ TITLE: METHOD OF IMPLANTING A MEDICAL ELECTRICAL LEAD INVENTORS: Camps, Antoine N J M (Toine) Duysens, Victor Kretzers, Leonardus J. C. Gerber, Martin T.										
P8564.00	US				F		LW091	TFW	10/131,417 04/25/2002	
Agent: _____ Agent Ref. No: _____ TITLE: VENTRICULAR SAFETY PACING IN BIVENTRICULAR PACING INVENTORS: Kramm, Berthold										
P8572.00	US				F		LW091	TFW	10/004,848 12/04/2001	
Agent: _____ Agent Ref. No: _____ TITLE: PATIENT ACTIVATED ADMINISTRATION OF DRUG BOLUS FROM IMPLANTABLE DRUG DELIVERY SYSTEM INVENTORS: Haller, Markus										
P8573.00	US				F		LW091	TFW	09/727,461 12/04/2000	
Agent: _____ Agent Ref. No: _____ TITLE: MEDICAL DEVICE AND METHODS OF USE INVENTORS: Hendriks, Marc										
P8580.03	US	D	01		F		LW091	TFW	09/947,433 09/07/2001	
Agent: _____ Agent Ref. No: _____ TITLE: TEMPORARY MEDICAL ELECTRICAL LEAD HAVING BIODEGRADABLE ELECTRODE MOUNTING PAD LOADED WITH THERAPEUTIC DRUG INVENTORS: Lindemans, Fredric W. Gebhardt, Ursula Hendriks, Marc										
P8623.00	US				F		LW091	TFW	09/842,232 04/26/2001	
Agent: _____ Agent Ref. No: _____ TITLE: PVC RESPONSE-TRIGGERED BLANKING IN A CARDIAC PACING SYSTEM INVENTORS: Struble, Chester L.										
P8722.00	US				F		LW091	TFW	09/779,537 02/09/2001	
Agent: _____ Agent Ref. No: _____ TITLE: ECHOGENIC DEVICES AND METHODS OF MAKING AND USING SUCH DEVICES INVENTORS: Koulik, Edouard										
P8799.00	US				F		LW091	TFW	10/127,033 04/22/2002	
Agent: _____ Agent Ref. No: _____ TITLE: INSULIN-MEDICATED GLUCOSE UPTAKE MONITOR INVENTORS: Houben, Richard P M										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P8892.00	US				F		LW091	TFW	09/727,462 12/04/2000	
Agent: Agent Ref. No:										
TITLE: IMPLANTABLE MEDICAL DEVICE TELEMETRY CONTROL SYSTEMS AND METHODS OF USE										
INVENTORS: Ferek-Petric, Bozidar										
P8936.00	US				F		LW091	TFW	10/132,510 04/26/2002	
Agent: Agent Ref. No:										
TITLE: CAPTURE MANAGEMENT IN MULTI-SITE PACING										
INVENTORS: Ferek-Petric, Bozidar										
P8937.00	US				F		LW091	TFW	10/126,604 04/22/2002	
Agent: Agent Ref. No:										
TITLE: DETECTING COAGULUM FORMATION										
INVENTORS: Eick, Olaf J.										
P8943.00	US				F		LW091	TFW	09/742,118 12/22/2000	
Agent: Agent Ref. No:										
TITLE: IMPLANTABLE MEDICAL DEVICE PROGRAMMING WANDS HAVING INTEGRAL INPUT DEVICE										
INVENTORS: Ferek-Petric, Bozidar										
P8946.00	US				F		LW091	TFW	10/132,320 04/26/2002	
Agent: Agent Ref. No:										
TITLE: ULTRASONIC SEPTUM MONITORING FOR IMPLANTABLE MEDICAL DEVICES										
INVENTORS: Houben, Richard P M Donders, Adrianus P. (Jos)										
P8975.00	US				F		LW091	TFW	09/449,934 11/29/1999	
Agent: Agent Ref. No:										
TITLE: MEDICAL ELECTRICAL LEAD HAVING VARIABLE BENDING STIFFNESS										
INVENTORS: Smits, Karel F.A.A.										
P8975.03	US	D	01		F		LW091	TFW	09/947,065 09/06/2001	
Agent: Agent Ref. No:										
TITLE: MEDICAL ELECTRICAL LEAD HAVING VARIABLE BENDING STIFFNESS										
INVENTORS: Smits, Karel F.A.A.										
P9030.00	US				F		LW091	ERW	09/535,840 03/28/2000	
Agent: Agent Ref. No:										
TITLE: PANCREATIC SECRETION RESPONSE TO STIMULATION TEST PROTOCOL										
INVENTORS: Marchal, Benoit										
P9073.00	US				F		LW091	TFW	09/765,506 01/18/2001	
Agent: Agent Ref. No:										
TITLE: MINIATURIZED-DRUG DELIVERY DEVICES SYSTEMS AND METHODS										
INVENTORS: Haller, Markus Clement, Claude										
P9085.00	US	P	01		F		LW091	TFW	09/765,484 01/18/2001	
Agent: Agent Ref. No:										
TITLE: SYSTEM AND METHOD OF COMMUNICATING BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE COMPUTER SYSTEM OR HEALTH CARE PROVIDER										
INVENTORS: Haller, Markus Donders, Adrianus P. (Jos) Ferek-Petric, Bozidar										
P9206.00	US				F		LW091	TFW	10/126,516 04/22/2002	
Agent: Agent Ref. No:										
TITLE: CARDIAC RESYNCHRONIZATION WITH ADAPTIVE A1-A2 AND OR V1-V2 INTERVALS										
INVENTORS: Struble, Chester L. Grandjean, Pierre A.										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P9258.00	US				F		LW091	TFW	10/132,509 04/26/2002	
Agent: Agent Ref. No: TITLE: ABLATION METHOD AND MEDICAL APPARATUS USING SAME INVENTORS: Ferek-Petric, Bozidar										
P9416.00	US	P	01		F		LW091	TFW	09/764,700 01/18/2001	
Agent: Agent Ref. No: TITLE: SYSTEM AND METHOD FOR EMERGENCY COMMUNICATION BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE COMPUTER SYSTEM OF HEALTH CARE PROVIDER INVENTORS: Haller, Markus Ferek-Petric, Bozidar Donders, Adrianus P. (Jos)										
P9417.00	US	P	01		F		LW091	TFW	09/765,218 01/18/2001	
Agent: Agent Ref. No: TITLE: SYSTEM AND METHOD OF AUTOMATED INVOICING FOR COMMUNICATIONS BETWEEN AN IMPLANTABLE MEDICAL DEVICE AND A REMOTE COMPUTER SYSTEM FOR HEALTH PROVIDER INVENTORS: Haller, Markus Ferek-Petric, Bozidar Donders, Adrianus P. (Jos)										
P9418.00	US	P	01		F		LW091	TFW	09/764,681 01/18/2001	
Agent: Agent Ref. No: TITLE: SYSTEM AND METHOD FOR REMOTE PROGRAMMING OF AN IMPLANTABLE MEDICAL DEVICE INVENTORS: Haller, Markus Ferek-Petric, Bozidar Donders, Adrianus P. (Jos)										
P9436.00	US				F		LW091	TFW	09/842,147 04/26/2001	
Agent: Agent Ref. No: TITLE: PRESSURE- MODULATED RATE-RESPONSIVE CARDIAC PACING INVENTORS: Struble, Chester L.										
P9437.00	US				F		LW091	TFW	10/126,538 04/22/2002	
Agent: Agent Ref. No: TITLE: IMPLANTABLE DRUG DELIVERY SYSTEM RESPONSIVE TO INTRA-CARDIAC PRESSURE INVENTORS: Struble, Chester L.										
P9440.00	US				F		LW091	TFW	09/842,148 04/26/2001	
Agent: Agent Ref. No: TITLE: DRUG DELIVERY FOR TREATMENT OF CARDIAC ARRHYTHMIA INVENTORS: Struble, Chester L.										
P9463.00	US				F		LW091	TFW	10/126,858 04/22/2002	
Agent: Agent Ref. No: TITLE: PRESSURE-MODULATED ENERGY LEVEL FOR PACING PULSES INVENTORS: Struble, Chester L.										
P9464.00	US				F		LW091	TFW	10/126,539 04/22/2002	
Agent: Agent Ref. No: TITLE: CARDIAC RESTRAINT WITH ELECTRODE ATTACHMENT SITES INVENTORS: Struble, Chester L. Grandjean, Pierre A. Zeiljenaker, Volkert A. Smits, Karel F.A.A.										

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PATENT RECORD SEARCH

Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P9473.00	US				P		LW091	TFW	09/879,282 06/12/2001	
Agent: Agent Ref. No: TITLE: DEEP TRENCH SEMICONDUCTOR CAPACITORS HAVING REVERSE BIAS DIODES FOR IMPLANTABLE MEDICAL DEVICES INVENTORS: Houben, Richard P M Weijand, Koen J.										
P9475.00	US				P		LW091	TFW	10/001,148 11/15/2001	
Agent: Agent Ref. No: TITLE: MYOCARDIAL PERFORMANCE ASSESSMENT INVENTORS: Corbucci, Giorgio										
P9491.00	US				P		LW091	TFW	09/842,813 04/27/2001	
Agent: Agent Ref. No: TITLE: CLOSED LOOP NEUROMODULATION FOR SUPPRESSION OF EPILEPTIC ACTIVITY INVENTORS: Wadman, Wytse Gielen, Frans L H										
P9511.00	US				P		LW091	TFW	10/126,537 04/22/2002	
Agent: Agent Ref. No: TITLE: BURR HOLE ASSEMBLY FOR STEREOTACTIC FIXATION OF A BRAIN PROBE INVENTORS: Gielen, Frans L H Cornau, Philippe										
P9557.00	US				P		LW091	TFW	09/909,999 07/23/2001	
Agent: Agent Ref. No: TITLE: CELL- BASED BIOSENSORS SUITABLE FOR IMPLANTABLE MEDICAL DEVICE APPLICATIONS INVENTORS: Houben, Richard P M Larik, Vincent										
P9648.00	US				P		LW091	TFW	10/126,522 04/22/2002	
Agent: Agent Ref. No: TITLE: ANTI-TACHYCARDIA PACING BASED ON MULTI-SITE ELECTROGRAMS INVENTORS: Struble, Chester L.										
P9711.00	US		L	F			LW091	TFW	60/371,543 04/11/2002	
Agent: Agent Ref. No: TITLE: METHOD AND APPARATUS FOR AUTOMATIC SHUTDOWN OF HIGH FREQUENCY DELIVERY UPON CATHETER DISLOCATION INVENTORS: Eick, Olaf J. Feron, John C.M.J.										
P9774.00	US		L	F			LW091	TFW	60/333,762 11/29/2001	
Agent: Agent Ref. No: TITLE: TRANS-SEPTAL MEDICAL ELECTRICAL LEADS AND METHODS OF STIMULATING A HEART INVENTORS: Struble, Chester L. Prinzen, Frits W. Smits, Karel F.A.A. Muhlenberg, Lambert Grandjean, Pierre A. Michels, Koen Lokhoff, Nicolaas M.										
P9781.00	US				P		LW091	TFW	10/008,773 12/05/2001	
Agent: Agent Ref. No: TITLE: DIRECTIONAL BRAIN STIMULATION AND RECORDING LEADS INVENTORS: Van Venrooij, Paulus Gielen, Frans L H Mullett, Keith R. Duyssens, Victor Gruia, Dan										

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Docket No.	Ctry	Rel.	Rel. #	Type	Status	Group	Div.	Attorney	App No	Pat No.
P9897.00	US				P		LW091	TFW	10/131,256 04/25/2002	

Agent: Agent Ref. No:
TITLE: ULTRASOUND METHODS AND IMPLANTABLE MEDICAL DEVICES USING SAME
INVENTORS: Ferek-Petric, Bozidar
Breyer, Branko

P9929.00	US				P		LW091	TFW	10/127,041 04/22/2002	
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Agent: Agent Ref. No:
TITLE: ANTI-SLIP LEADS FOR PLACEMENT WITHIN TISSUE
INVENTORS: Struble, Chester L.
Grandjean, Pierre A.
Smits, Karel F.A.A.

98 TOTAL RECORDS REPORTED